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Procedia Computer Science 102 (2016) 244 – 250

Procedia
Computer Science

12th International Conference on Application of Fuzzy Systems and Soft Computing, ICAFS
2016, 29-30 August 2016, Vienna, Austria

Statistical reasoning of impact of motivation on students' achievement in foreign language learning

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Abstract

This research focuses on statistical reasoning in motivation issues in learning a foreign language. The opinions of university students studying at different departments and taking a foreign language course have been investigated through 43 statements related to motivation issues in order to find out their opinions on motivation sources in general, classroom motivation sources and motivation problems that arise or they encounter during their foreign language studies. The responses of participants through all the statements were in very close line with each other, without revealing any significant difference. The relation between the participants achievement level in foreign language courses and motivation revealed contradiction as the respondents claim lack of motivation but have a achievement level over the minimum pass level. This result reveals that in terms of statistical reasoning there is a contradiction between negative motivation and positive achievement.

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Peer-review under responsibility of the Organizing Committee of ICAFS 2016

Keywords: statistical reasoning; achievement; foreign language learning; higher education; motivation

1. Introduction

Motivation, defined as a physical, psychological or social need which motivates the individuals to reach or achieve their goals and fulfill their needs and, finally, feel satisfied as a result of achieving their aims¹ is a phenomenon regarded as one of the most important requirements for success and satisfaction. The role and importance of motivation is no different in education, as well. In this respect, motivation is regarded as one of the basic, most needed and important factors for academic learning and achievement across childhood through

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adolescence^{2,3}. Deci and Ryan⁴ point out that motivation is related to various outcomes such as curiosity, persistence, learning and performance. According to Self Determination⁵ there are three types of motivation; extrinsic motivation, intrinsic motivation, and amotivation. Intrinsic motivation is related to mental satisfaction which is achieved by others' praise, while, extrinsic motivation is related to incentives activated by external factors such as getting rewards for achievements and success. In amotivation, individuals neither intrinsically motivated nor extrinsically motivated and lack any type of motivation for some reason. The amotivated individuals experience feelings of incompetence and suffer from feeling of insufficiency which is caused by uncontrollable forces out of their own control. Academic intrinsic motivation plays a significant role in achievement, competency and academic learning. Deci and Ryan⁴ put forward that intrinsic motivation generates due to the innate psychological needs of competence and level of self determination. Regarding the role of motivation in language learning, there are several claims that positive motivation increase the level of achievement whereas negative impact of motivation decreases the level of achievement^{6,7}. According to Cook⁸ the performance and presentation of a number of learners in the context of foreign language learning is improved and superior than others due to positive motivation. Cook also claims that there are three factors which influence the language learning: age, personality and motivation. However, it could be claimed that motivation is the most important and effective factor amongst the mentioned three factors that affect second language learning. Supporting this assumption, Ellis argued⁹ that the learning process simply occurs when a person is motivated for learning. In this respect, it could be argued that two kinds of motivation can be observed among learners; the type of motivation which has a positive, efficient, and useful effect in learning and the second one is the type of motivation which has negative effects on learning and weakens the language learning process.

Tengku and Sepideh¹ claim that the aims of the class should be in such a way that motivate the learners who have instrumental motivation in order to become aware of and realize the value of the learner who thinks about foreign language as an instrument for reaching a particular goal such as achieving grades.

Besides, it is generally agreed that in order to make the learners have a positive view about their own effort, some rewards such as grade, degree, and any sort of educational, scholastic, and academic encouragement should be given to them^{6,7,10}. In addition to this, the policies developed for encouragement of the learners in classroom environment play an important role in achievement and in obtaining a good or a positive learning outcome. Consequently, motivation directly influences and affects the language learner's learning methods, skills, and practices. That is, motivation has a high effect on learner's communication with foreigners, determining learning amount, in addition to developing the desired levels of language teaching such as reading, comprehension, speaking, and writing. In all respects, motivation has a direct effect on both quality and quantity of language learning.

2. Method

2.1. Participants

Participants of this research are 57 male students and 22 female students studying at different departments of a multinational university and taking optional foreign language courses apart from their departmental courses. Their ages vary between 18 and 22, and they are from 11 countries.

2.2. Instruments

A questionnaire consisting of 43 statements within three groups of statements related to general motivation sources, classroom motivation sources and motivation problems while learning a foreign language. An opinion based (strongly disagree, disagree, moderately agree, agree, strongly agree) likert scale with five level was used to obtain the responses. In the first section, 18 statements were used to obtain opinions of participants on motivation sources in general. In the second section, 8 statements were used to obtain the opinions of participants on classroom motivation sources, and in the third part of the questionnaire, 17 statements were used to obtain opinions of participants on motivation problems.

2.3. Implementation

At the initial stage of the research, a draft questionnaire with 50 statements was administered to 85 students studying at various departments and taking optional foreign language courses. A factor analysis was carried out for the outcomes of the draft questionnaire and 7 statements without sufficient reliability, relevance or considered to be invalid were removed. The redesigned questionnaire was administered again to the same group of participants, however, this time only 79 participants responded to the questionnaire.

3. Data Analysis

The data obtained through the questionnaire was processed and analyzed by using the "descriptive statistics", "independent samples t-test" and ANOVA test in SPSS to compare the outcomes between and within groups.

4. Results and Discussion

The questionnaire was divided into three parts; opinions of participants on motivation sources in general, classroom motivation sources and motivation problems in learning a foreign language. Findings of each group of statements were analysed within itself and between groups.

4.1. Opinions of participants learning a foreign language on general motivation sources

Students studying at various departments and learning a foreign language as a second language pointed out their opinions on 18 statements emphasizing various motivation sources. They responded to statements depending on an opinion-based Likert scale with five levels; strongly disagree, disagree, moderately agree, agree and strongly agree. All responses of both male and female students centred around disagree, without revealing any significant differences between genders.

The overall findings indicate that all students disagree that; they learn a foreign language because they are interested in that language; they learn a foreign language because they sincerely want to learn it; they learn a foreign language because they feel they are competent enough to learn a foreign language; they learn a foreign language because learning a foreign language will promote their position in society; they learn a foreign language because learning a foreign language will provide them with opportunities to communicate with more people; they learn a foreign language because learning a foreign language will enable them to reach much easier to written sources of their interest; they learn a foreign language because learning a foreign language will increase their chances a lot in finding a job; they learn a foreign language because they can get a higher salary; they learn a foreign language because they can carry out their educational studies in an easier way; they learn a foreign language because learning a foreign language will promote their career; they learn a foreign language to discover themselves; they learn a foreign language because their employers want them to learn a foreign language; they learn a foreign language because the skills they gain throughout the foreign language learning process increase their prestige amongst their friends; they learn a foreign language because they expect promotion for learning a foreign language; they learn a foreign language because the materials they study with are attractive and interesting; they learn a foreign language because the enthusiasm of the group within which they learn the foreign language motivates them, too; the implementation process that goes on in accordance with their expectations promotes their enthusiasm in learning that language; knowing that they will use the foreign language motivate them.

Table 1. Opinions of participants learning a foreign language on motivation sources.

Gender	N	\bar{X}	Sd	Significance
Male	57	2,0760	,7259	,594
Female	22	1,9292	,6231	
Total	79	2,0026		

Although it was expected to receive various responses for each statement as motivations sources in learning a foreign language may differ from person to person, none of the responses of students is significantly different than others and all responses of both female and male students are very close to each other. The means of all responses to motivation sources centred around 2 which indicates that all respondents disagree with motivation sources. The level of mean differences within groups and between groups is not significant, as well ($p = ,594$).

4.2. Opinions of Participants on classroom motivation sources in foreign language learning

In the second part of questionnaire, opinions of students on classroom motivation sources in foreign language learning were explored through 8 statements related to classroom motivation sources. The students responded to questionnaire disagree on all statements regarding the classroom motivation sources in foreign language learning. In this respect, participants disagree that; their teachers provide students with sufficient support in their studies; their teachers provide students with sufficient support in their studies; their teachers carry out various activities throughout implementation process in lessons; teaching activities carried out in this lesson encourage students to be creative; activities carried out in this lesson are interesting for students; students feel themselves comfortable in their group studies in foreign language lessons; students comprehend the aim of the homeworks; homework tasks are related to real life situations and are meaningful; students are given sufficient time to learn subjects. The overall findings of this section are beyond expectations and all stand out in negative side of the scale. The responses of all students, regardless their genders, are very close to each other and centred around level 2 which indicates that all students disagree with the statements regarding classroom motivation sources in foreign language learning.

Table 2. Participants' opinions on classroom motivation sources in foreign language learning.

Gender	N	\bar{X}	Sd	Significance
Male	57	2,0438	,47159	,329
Female	22	1,9034	,72310	
Total	79	1,9736		

The analysis of responses reveal that the significance level between the mean values of genders is not significant ($p=,329$) and this indicates that there is no significant difference between the opinions of students on classroom motivation sources.

4.3. Opinions of participants on motivation occurring throughout the foreign language learning process.

In the third part of questionnaire, participants responded to 17 statements regarding the motivation problems that appeared throughout the foreign language learning process. Contrary to responses of participants to part one and part two, the all the responses in this part centred around level 3 which indicates that all respondents moderately agree with the statements regarding motivation problems that appear throughout the foreign language learning process. The participants moderately agree that difficulties they encountered in past appeared because of not becoming proficient in a foreign language; they learnt a foreign language in past, it was useless, and it will again be useless; learning a language is a matter of skill, their skills are very limited; they keep back from their friends because of the fear of being harassed for learning a foreign language; they cannot focus on learning a foreign language because of their responsibilities towards their families; if they get some positive feedbacks, they will be more enthusiastic in learning a foreign language; the reason that they could not learn a foreign language is that they have not studied hard enough; they cannot learn a foreign language because they become nervous and forgetful; studying with teachers who like their jobs in teaching a foreign language and motivate them for learning increases their enthusiasm and motivation; disliking the countries of which languages they are learning is a disadvantage for them; they think they have a resistance against learning a foreign language and they will never overcome this; language problems they encounter while learning a foreign language discourage them; they cannot learn a foreign language because they do not know anything about learning strategies; expectations in learning a foreign language are too high and this causes a negative impact on their learning; what they do is not learning a language but memorizing some language

structures; not having proper language environment to practice their second language discourages them; the pressure made by people with whom they contact negatively affect their language learning process.

Table 3. Opinions of participants on motivation problems occurring throughout the foreign language learning process.

Gender	N	\bar{X}	Sd	Significance
Male	57	2,9886	1,17159	,682
Female	22	3,0401	1,20310	
Total	79	3,0143		

Opinions of participants on motivation problems occurring throughout the foreign language learning process are almost exactly the same on every issue related to motivation problems. The mean values of both participants, regardless their gender, centre around level 3 which indicates that the participants moderately agree on all statements related to motivation problems.

4.4. Achievement level of participants in learning a foreign language

Participants of this research were studying English and Russian languages at the time of this research. The average means of grades obtained by the participants at the end of the term are shown in Table 4 below. 18 participants were taking courses of both languages, however, only the data of participants whose grades were obtained at the end of the term are shown in Table 4. Exam results of some participants were not available to calculate their overall achievement level as they did not take one or more exams and have not yet completed their courses, though they responded to the questionnaire.

Table 4. Achievement level of participants in English and Russian languages.

Gender	N	\bar{X}	Sd	Significance
English				
Male	46	7,2826	2,05116	,069
Female	25	8,4000	1,95667	
Total	71	7,8413		
Russian				
Male	39	6,0513	1,87713	,396
Female	25	6,6000	2,64035	
Total	64	6,3256		

As is apparent in Table 4, the achievement level of students out of 10 is 7,8413 for English, and despite the fact that the female learners obtained a higher overall grade in descriptive terms than that of male students, there is no significant mean difference between the groups ($p = ,069$). In Russian language, both groups obtained almost the same grade and the mean difference between the groups is not significant, as well ($p = ,369$). According to the grading system in use, 6 out of 10 is the minimum "pass" grade, and 7,8 is regarded "good".

Despite that the participants opinions regarding general and classroom motivation sources were not positive, their achievement level in both language stands out on the positive side of grading system. This indicates that the opinions of participants on motivation sources and their achievement level in foreign language courses are not in coherence. According to responses of participants, they lack motivation at certain levels, however, their achievement level is in contradiction with their motivation level. It might be assumed that a higher motivation level might have increased their achievement level in learning a foreign language.

5. Conclusion

The overall results indicate that all the participants, regardless their gender, responded in the same way to the statements throughout the three groups given in the questionnaire.

According to responses, the participants do not agree that; they are interested in the foreign language they learn, they sincerely want to learn it, they feel that they are competent enough to learn a foreign language, a foreign language they learn will promote their position in the society or would provide them with opportunities to communicate with more people, they can reach the written sources of their interest much easier, a foreign language will increase their chances a lot in finding a job, they will get a higher salary because of knowing a foreign language, they can carry out their educational studies in an easier way with the help of a foreign language, a foreign language can help to promote their career, they can discover themselves with the help of a foreign language, their employers required them to learn a foreign language, they can increase their prestige amongst their friends, they expect promotion for learning a foreign language, the materials they study with are attractive and interesting, the enthusiasm of the group within which they learn the foreign language motivates them, the implementation process that goes on in accordance with their expectations promotes their enthusiasm in learning that language and that they will use the foreign language to motivate themselves.

Moreover, in the second part of the questionnaire the respondents again disagree on all statements regarding the classroom motivation sources in foreign language learning. In this respect, participants claim that they receive insufficient support from their teachers, sufficient amount of activities are not carried out by their teachers, lessons do not encourage students to be creative, activities are not interesting or attractive, students do not feel comfortable in their group studies or comprehend the aim of the homework tasks, homework tasks are not related to real life situations and not meaningful, and students are not given sufficient time to learn subjects.

The outcomes of the third part of the questionnaire are different than the outcomes of the first two parts to some extent. In the third part of the questionnaire, all the responses of participants, regardless their genders, departments or foreign language they study on, centred around level 3 which indicates that respondents were moderately agree with the statements related to motivation problems. In this respect, motivation problems are claimed to be not becoming capable of learning a foreign language, and the foreign language learnt in past was useless and the newly learnt foreign language will be useless again. Besides, participants claim that they lack necessary skills in learning a foreign language, they have the fear of being harassed for learning a foreign language, and they cannot focus on learning a foreign language because of their other responsibilities towards their families. They also believe that they do not receive positive feedbacks, they do study hard enough, they become nervous and forgetful while learning a foreign language. Regarding the teachers' attitudes, they claim that teachers lacking enthusiasm cause negative motivation on learners. Another finding is that disliking the country of origin of the foreign language is a reason for lack of motivation. Regarding the psychological issues, students claim that they have a resistance against learning a foreign language and they will never overcome this, and language problems encountered during learning a foreign language as well as not knowing anything about learning strategies are reasons for lack of motivation. Besides, expectations in learning a foreign language are too high and this causes a negative impact on their learning. They do not learn by just memorize some language structures and this is not a sufficient reason or policy to learn a language, not having a proper language environment to practice the foreign language is also a serious reason for discouragement, and finally, the pressure made by people with whom the learners contact negatively affect the language learning process.

Despite all the negative aspects of motivation sources, the achievement level of participants in learning a foreign language is over minimum pass level which is 6. This indicates that the participants claim that they lack motivation, however, their achievement level is still over the minimum pass level. It could be assumed that if the motivation level of participants were higher, the achievement level of the participants might have been higher, too. The overall results of this research indicate that, in terms of the statistical reasoning, there is an apparent contradiction between the motivation level and the achievement level of students.

6. Recommendations

The obtained throughout the research revealed quite surprising results in that all 79 participants were almost exactly disagree or moderately agree on the statements related to motivation sources, classroom motivation sources and motivation problems. On the other hand, despite the fact that all the participants claimed that they were lacking

motivation, the grades obtained by the participants at the end of the term were over the minimum pass level and this result is apparently in contradiction with their motivation level. In the first two parts which focused on the general motivation sources and classroom motivation sources, it was expected to get results centering around levels 3, 4 and 5, however, the results was just opposite the expectations and all the responses centred around on the negative side of the scale. As is the centre of interest of the first part of the questionnaire, it is widely accepted that knowing a foreign language is always an advantage in many ways, however, the respondents, for some reason, disagree on this issue. Why students responded in a negative way rather than a positive way must be the topic of another research and students' approach to the motivation sources must be investigated in detail. Also, the negative approach of students to classroom motivation sources must be investigated in detail as this is a very important issue. Lack of motivation in classroom while learning a foreign language is apparently a problem which negatively affects the implementation process and a higher motivation level might have resulted in a higher achievement level. Opinions of participants on motivation problems which centred around level 3 referring to "moderately agree" is reasonable, however, this issue must also be investigated in depth, too.

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